Amendment to the Specification:

Please amend the paragraph beginning at page 6, line 17, as follows:

The lead bar is made of a tungsten wire with a diameter of ~~Ø1 to Ø8~~ 1 to 8 mm, and is a single piece comprising an inner lead 12 that extends beyond the non-conductive end 22 of the functionally gradient material 21 and an outer lead 13 that extends out from the other, conductive end. There is good conductivity when the inner lead 12 and the outer lead 13 make up a single lead bar 11 in this way, and it is possible to carry a large current. However, it is possible for the lead bar 11 to comprise a separate inner lead 12 and outer lead 13 inserted into opposite ends of the functionally gradient material 21, thus using the conductive component of the functionally gradient material 21 to provide the electrical path.

Please amend the paragraph beginning at page 10, line 7, as follows:

In this implementation, a lead bar made of tungsten wire with a diameter of ~~Ø1~~ 1 mm was inserted into the insertion hole, after which the powder molding underwent partial sintering at 1200° C for about 30 minutes under a hydrogen atmosphere. Following that, the samples were given an oxidation-resistant coating by coating them with an organic solvent containing silica glass, placing them in a sintering oven, and fully sintering them at 1720 to 1750° C for 10 to 15 minutes.

Please amend the last paragraph of page 10, as follows:

The points at which the symbols "○", "Δ", "X" are marked in this figure indicate combinations of inner diameter C and depth L of the holes in the samples. The seals which were samples in this test were produced in five varieties, with inside diameters C for lead bar insertion at ~~ø4.6, ø4.8, ø7.6, ø9.6 and ø12,~~ 4.6 mm, 4.8 mm, 7.6 mm, 9.6 mm, and 12 mm, and in each variety, samples were produced with different gap depths L (mm) to change the proportion of components at the point of attachment.

Please amend the first paragraph of page 11, as follows:

For example, for the samples with an inside diameter of ~~ø4.8,~~ 4.8 mm for the hole from the non-conductive end to the point of attachment, the figure indicates that six samples

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were produced with different depths L from the non-conductive end to the point of attachment. The proportion of molybdenum at the point of attachment in these samples was 55 Vol%, 39 Vol%, 13 Vol%, 2.3 Vol%, 0.6 Vol% and 0 Vol%.

Please amend the paragraph beginning at page 11, line 21, as follows:

Now, the samples that were evaluated as "o" in the test implementation were actually welded into lamps as seals to check whether there would be any deformation of the seal material during the sealing process. The light-emitting tubes of the lamps were made of silica glass with an outside diameter of ~~ø22.7~~ 22.7 mm and a tube wall thickness of 2.35 mm.

Please amend the paragraph beginning at page 12, line 11, as follows:

Regarding the sample in which the inner diameter **C** of the hole was ~~ø4.6~~ 4.6mm and the outer diameter of the lead bar d was ~~ø4,~~ 4 mm the gap between the functionally gradient material and the lead bar was too small; the two made contact during the full sintering and cracking occurred. In the case of samples in which the inner diameter **C** of the hole was ~~ø4.81~~ 4.81 mm or greater, no cracking was seen. Nevertheless, in the sample with an inner diameter **C** that was too large, specifically a hole diameter of ~~ø12~~ 12 mm compared with an outer diameter **D** of ~~ø16,~~ 16 mm the wall of the functionally gradient material from the point of attachment to the lead bar was too thin, and the powder molding was broken in handling. Samples with a smaller hole diameter **C**, such as that with an inner diameter of ~~ø9.6,~~ 9.6 mm did not break easily in handling and could be used as seals. These seals did not deform during sealing of the light-emitting tubes, and were well-suited to their purpose.

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